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R. Dawson, F.F.C.S., F.C.I. (Eng.), Secretary-Manager and Editor

Telephone 2 - 0700

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. . CONTENTS . .

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EDITORIAL

Let's Get On With The Job

In common with millions of others, we recently sat in our home and listened to Mr. Churchill's speech on the conduct of the war and were definitely impressed with his remarks.

In common with many others we have also been disgusted with the attitude of certain of the population in their criticism of what has happened and what will happen in the immediate future.

It seems to us that what democracy means to a lot of people is simply the privilege of hollering to the heavens in criticism of their leaders, after they have duly elected those leaders.

In Canada in particular there is no denying the fact that we are "playing politics" and that much of our criticism is wrongly directed.

Instead of continually harping on what we consider to be past mistakes on the part of our government and our leaders, we might better be employed on getting on with the job and in seeing to it that we are doing our full part in this struggle.

How many of us listened to warnings long before 1939 to the effect that the Axis powers were bent on World domination? How many of us were prepared to suffer increased taxation to prepare ourselves for war and when it did come, how many of us considered it to be just another capitalistic war, or just a "phoney war"? Let us be honest with ourselves.

We have from time to time listened with disgust to a tirade against Canadas so-called war effort by people who never leave their own immediate district and who consequently know little or nothing about it.

We have continual shouts for a total war effort from people, many of whom are doing little or nothing in the war effort.

Recently the Wartime Prices and Trade Board rationed sugar, and on the very day following hundreds if not thousands of people tried, and in many cases succeeded in obtaining far more than their ration of this commodity. Yet these very same people shout about our lack of effort.

When the government made it plain that it intended to conduct a plebiscite to releave it from previous promises, we had the spectacle of supposedly responsible people urging a boycott of the plebiscite and even of the Victory Loan.

When the three German warships escaped from Brest, through the Channel to Heligoland Bight, many people classed it as a disgraceful affair. There is no disgrace in being outsmarted and many of those who classed the escape as "disgraceful" have never even seen the sea and can have no realization whatever of the conditions which made the escape possible.

We are supposed to be fighting to preserve our way of life, but if our way of life simply means to criticize anything and everything regardless of the facts or what we know of them then we had better quit right now.

Here we have a new Victory Loan. We are asked to subscribe six hundred million dollars. How many of those of us who spend our time in criticizing the government will put everything he can into this Victory Loan?

How many of those who are hollering are doing everything they can to win this war?

Let us face the facts and let each one search his or her soul and ask, "What am I doing to win this war?" Then let us, each one of us, square his shoulders and be prepared to put forth a supreme effort in whatever part we can play and LET'S GET ON WITH THE JOB!

The Victory Loan

As we go to press the Victory Loan is with us and more and more steps are being taken to shake many of our countrymen out of their lethargy in respect to subscriptions to this loan. There has been more talk about this loan than any previous one but we are not so sure that the talk has shaken the foundation as it were, of the people at whom it was aimed.

Too many people still look at this war from afar; they point, with a lot of grumbling in many quarters to income tax levies which will soon be with us, to the many and varied deductions from pay and to the tremendous cost of the war although they seem to know little about the latter part of it.

Six hundred million dollars is a lot of money but we are confident that it can be raised. The point is will the people who ought to subscribe to the last cent actually do so? We doubt it very much and sooner or later we will probably have to come to some form of raising such loans other than by voluntary subscription.

It is rather popular "sport" nowadays to berate the country's war effort and to point out that we are not on an all-out war effort, to say that this and that section of the country is not "pulling its weight" and we have no desire to be included in the class of people who do such things just for the pure joy of doing them.

We have, in the past, urged some form of compulsory saving and we notice that many people now are urging a general rationing scheme in order to make more money available for war purposes.

A lot depends on the reception which the present Victory Loan receives but it does seem to be a fact that most people who subscribe to these loans subscribe only what they can "spare" and not all they can actually put into such loans.

If that is true, and we believe it is, then some other form of raising loans in the future will have to be put into effect and the time to begin is now.

Rationing by degrees is already being put into effect but a whole lot more needs to be done before such rationing will have any great effect on the spending of the people and it is this spending, indiscriminate spending if you will, which determines how much the working people can put into loans.

Whatever the answer, whether it be compulsory saving or saving because of a general rationing system, let us have it now.

Across the Secretary's Desk

During the past month it has been my privilege to visit the Windsor, Niagara and Kitchener chapters and to form some estimate of "how goes the battle." In Windsor I found much enthusiasm and a definite go ahead attitude. True, many of the members are working night and day as in other localities but the attendances are keeping up nicely. Watch this Windsor chapter.

In Kitchener the attendances are also keeping up, bearing in mind the scattered nature of the membership, while in the Niagara district where the membership is definitely scattered, the attendances have been low. This is undoubtedly due to the war effort, to the condition of the roads and the scattered nature of the membership, but in many instances there are members who could attend more often than they do. They little know what they are missing.

Hamilton chapter has gone to one meeting per month for the duration of the war because of extreme pressure of business and the difficulty in obtaining speakers, but the attendances so far have been reasonably good.

Undoubtedly many of our members are working many extra hours and cannot in the ordinary way of things attend every meeting, but we would point out that in most of the meetings there are matters discussed which would help them in their work.

The Windsor chapter keeps ahead in the running for the Fernie Trophy with Kitchener not far behind and London and Ottawa still well up. It looks like a real race right up to the wire.

Recently I had the pleasure of meeting with our Ontario Educational Committee and it was a grand meeting. The members took hold of the business in a workmanlike manner which is indeed a happy augury for our future.

One of the matters discussed was the future of our Student Sections and in this connection the Committee approved in principle with a plan suggested by the writer.

This matter will be considered again at the next meeting and if finally approved as undoubtedly it will be, it should have a far reaching effect on our future as well as being something which the student members will appreciate.

I am receiving many enquiries concerning the dates of the spring examinations. No dates have yet been set but they will probably be held in late April and early May and members will be notified immediately definite dates have been set.

These examinations will probably interest many more members this year than ever before and we shall, in all likelihood, have the largest number ever, sitting for the exams.

R.D.

Chapter Notes

Windsor Chapter.

The January meeting of the chapter brought a welcome visit from our Secretary Manager who gave an interesting talk on "What Are Standard Costs." The discussion period was both lengthy and informative and it was one of our best meetings. The Student Section continues to interest more and more members and we are hopeful that the Chapter will win the Fernie Trophy for the chapter showing the best percentage of increased membership. The February meeting will be a joint meeting with the Detroit chapter of the N.A.C.A. and promises to be a real affair.

Kitchener Chapter.

Our February meeting was another successful affair when Mr. A. J. Mouncey of Hamilton addressed a fair gathering on "Plant Layouts in Relation to Time Study." The speaker gave a most comprehensive talk and the discussion period was again a good one. After that a buffet lunch was served and the members continued to argue on the pros and cons of the subject with the speaker the centre of quite a gathering.

Niagara Chapter.

The February meeting, held at the Plant of the Plymouth Cordage Company, Welland, by kind permission through Frank Hesler, brought a most delightful talk from Mr. W. I. Miller of the F. N. Burt Company, Buffalo, N.Y. on the subject, "Time Study Methods and Wage Incentives." Mr. Miller dealt with a study of the Time Study Methods in vogue at his company and the talk was of sufficiently broad scope in that it dealt with the tying in with the Indirect Budgets. The attendance, due to the bad roads was not large but those who did attend were well rewarded.

Hamilton Chapter.

The February meeting of the Hamilton Chapter saw only a small attendance out to hear Mr. W. Nicholson of the Income Tax Department, lead a discussion on Income Tax and Excess Profits Tax Regulations. The small attendance was due to several reasons but sickness among the members played a big part. However, the meeting was very enjoyable and those who did attend were quite pleased with the whole affair. Due to the extreme pressure of work and the difficulties encountered in obtaining a sufficient number of qualified speakers the chapter has reduced its meetings to one per month instead of two.

For the March meeting it is expected that a prominent speaker will be heard on the subject of priorities. This meeting will be held on March 25th.

London Chapter.

The February meeting of the London Chapter brought out a fair attendance to hear a discussion on "Material Accounting and Records" and it was a most enjoyable affair. These discussion meetings are growing in both attendance and importance and the Student Meetings also are showing much better attendance and more enthusiasm.

Toronto Chapter.

The February meeting of the chapter saw a good crowd out to hear Mr. R. J. H. Ryall speak on "The Cost Accountant and the Costing Profession." Mr. Ryall is a well known expert on the subject of Cost Accounting and all that pertains to it and the Toronto members took full advantage of his presence both to hear him and to ask questions at the close of the meeting. The Student Section under the able tutelage of Alex Blanchard is going great guns with meetings twice monthly.

Montreal Chapter.

On February 27th, the Montreal Chapter will hear its fourth lecture in the Management Series with Mr. J. S. Cameron, Manager of the Northern Electric Co. Ltd., as guest speaker. Mr. Cameron will speak on "The Plant Engineer and Management" and it is understood that he will outline a specific case with illustrated chart as a basis for an enlarged discussion. Professor Humphrey will deliver his third talk in his series on Industrial Legislation

Literature Received

Deterioration and Loss in Fixed Assets and its Recovery.

Cost Accountant, December.

A very complete and splendid article on a subject not very often discussed and seldom written about. It should interest every accountant.

Methods Study Applied to an Accounts Payable System.

N.A.C.A., January 15.

A very fine article dealing with methods of improving and simplifying the procedure involved in verifying, accounting for and paying creditor's invoices.

Co-ordinating Material with Production Needs.

N.A.C.A., February 1.

Deals with fundamentals rather than with specific problems relating to the war effort. An extremely fine article and one which accountants generally should read.

The Last-in, First-out Inventory Basis.

Jrnl. of Accountancy, February, 1942.

A report by American Institute of Accountants Committee on Co-operation with Controllers' Congress of the National Retail Dry Goods Association.

New Members

Montreal Chapter.

J. L. Griffiths, Can. Pneumatic Tool Co. Ltd., Montreal.

A. C. Joncas, Shawinigan Water and Power Company, Montreal.

Windsor Chapter.

Robert C. Forbes, Chrysler Corp. of Canada Ltd., Windsor.

London Chapter.

Miss E. M. Owen, St. Thomas Metal Signs Ltd., St. Thomas, Ontario.

Hamilton Chapter.

A. Lucas, Hamilton Bridge Co. Ltd., Hamilton.

The Contract Bonus Wage Incentive System

An Incentive Peculiar to the Mining Industry

By C. E. SHEPPARD, B.Com.

In a broad sense, an operating mine can be divided into two main departments,—the mine or production department which locates, breaks and removes the ore, and the mill or reduction department which takes delivery of the ore and extracts the valuable mineral content.

Of the two departments, only the mine lends itself readily to wage incentives and it is in this department that the contract bonus system is used.

How or when the system originally received its name is not known. It is known, however, that it has been adopted from a practice prevailing in the early days when it was common for mine owners to let contracts for underground work, such as sinking a shaft or driving a long tunnel. These contracts usually specified that the job was to be paid for at an accepted rate per foot, either lineal or cubic, depending upon the type of work to be done. The men doing the work were employed by the contractor, not by the companies. Legislation and practical difficulties caused the practice to gradually die out, but the principle was retained and is used to-day as the basis of an effective wage incentive system by most mining companies.

As the name implies, the system establishes an incentive by offering a bonus derived from some form of a contract. The word "contract", however, is misleading. It is only a popular term used by miners when referring to the rate applicable to a particular working place. In speaking of this place, the miners say that it is "on contract", which means that the job offers an opportunity to earn a bonus in addition to the guaranteed daily wage. A working place not on contract is said to be "on company time", a phrase which denotes that only the daily wage can be earned on that job.

Invariably, miners prefer to work on contract, a fact which makes management's task a pleasant one when it is decided to instal a contract bonus system. Such a system, besides establishing a measure of control over the cost of certain underground operations, has the advantage of being relatively simple, practical and effective in operation, and almost universally acceptable by the mining industry.

Installation and Operation.

Rates:

The first step, in starting the system, is to set rates for the various types of work. In simple language, a rate is the price per foot which the management is willing to pay for a specific kind of work. As there are a number of different kinds of work, — drifting, raising, slashing, sinking, stoping, — each will have its own rate.

The engineering department, taking into consideration the nature of the rock, type of work to be done, accessability of the location and size of the heading, sets a price which will be paid for each lineal foot of advance and/or cubic foot of rock broken. The rate is based upon the cost of labor, dynamite, fuse and blasting caps required to do the job, plus an allowance, so that a skilful miner will be able to do the work at less than the rate and

so earn the difference as an efficiency bonus. Occasionally, unforeseen difficulties may be encountered such as a heavy flow of water or bad ground which must be well timbered. Adjustments in the rate will be necessary to compensate for these difficulties, or as an alternative, the contract can be stopped while such trouble exists and resumed when normal conditions are encountered again.

New mines frequently experience some difficulty, at first, in setting a fair rate, due to the lack of adequate supporting data. In the older mines, information regarding the footage advance per shift in the various kinds of rock, the behavior of several types of powder, and the mechanical efficiency of the drilling machines, will be available and will be given consideration in arriving at the rate. It must be understood that the object of setting a rate is to provide an incentive. If the rate is too low and the miner cannot earn a bonus, he soon stops trying and becomes indifferent. On the other hand if the rate is too high and the miner makes a "killing", it may be that efficiency is being bonuses when efficiency in fact does not exist. Either case an investigation of the rate.

Contracts:

The allocation of a rate to a working place creates a contract, the object of which is to advance the heading a certain number of feet at a cost per foot equal to or less than the specified rate. All decisions regarding the headings to be placed on contract and the date when such work is to begin, rest with the management. Plans of development and mining work are prepared by the engineering department, usually several months in advance, so that ample time is available to regulate a steady and uninterrupted rotation of tasks.

Each month it is the duty of some member of the engineering staff to prepare a list of the contracts to be started on the first day of the following month. This list is prepared in the form of a CONTRACTS WORKING sheet which is shown below.

(Form 1)

CONTRACTS WORKING DURING JANUARY, 1942

Contract Number	Working Place	Starting Date	Rate		Size	Footage
1	22-00 Drift	Jan. 2nd	$8.00	Lin. Ft.	7 x 7	
2						
3						
4						
5						
Etc.						

To prevent confusion each line on this sheet is numbered so that a contract automatically receives the number of the line on which it is placed.

On the last day of each month, this sheet is tacked on a notice board in the mine dry so that everyone may see it. Additional supporting data, detailed as to distances, degree of slope, or angle of elevation, is supplied to the captains and shift bosses. The shift bosses on whose "beats" the working places are located, then assign crews to the headings and the contracts are in operation. Contracts run for a period of one calendar month or for that

portion of the month remaining, if the contract is started later than the first of the month. During the month contracts may be completed, be temporarily stopped, or new contracts may be started, but in any case at the end of every month the engineering department holds a "measure up day" when all unfinished contracts are measured. If contracts are completed during the month, they are measured when finished. If they are not completed and must overlap into the following month, the amount of work finished during the current month is measured and valued for bonus purposes. The unfinished portion of the contract is started again on the first day of the next month as a new contract by transferring the working place and rate from the old contracts working sheet to the new sheet.

Footage measurements obtained by the engineering department are marked on the contracts working sheet opposite the correct contract number in order that the miners may see what they have accomplished during the period and make a complaint, if they believe the measurement to be wrong. The contracts working sheet is now complete and appears as follows:

(Form 2)

CONTRACTS WORKING DURING JANUARY, 1942

Contract Number	Working Place	Starting Date	Rate		Size	Footage
1	22-00 Drift	Jan. 2nd	$8.00	Lin. Ft.	7 x 7	128.5
2						
3						
4						
5						
Etc.						

A reasonable period of time is allowed for investigation of complaints and the checking of footages. The old contracts working sheet is then removed from the notice board and taken to the general office where the information is transferred to accounting records.

Accounting Procedure and Records:

The determination of bonuses involves two calculations:

1. Finding the value of each contract by multiplying the measured footage by the rate per foot.
2. Finding the actual cost of each contract by accurately accumulating the daily labor and powder charges.

If the value exceeds the actual cost, the difference represents the bonus earned by and payable to all the men who worked on the contract. Should the actual cost exceed the value, then the contract is said to have earned a deficit. This deficit is not deducted from the miners' wages; it means that the men working the contract have failed to come up to standard and will receive only their guaranteed daily wage.

To provide a permanent record of each contract and to expedite calculations, it has been found convenient to assemble all the data on a form about 12" x 12" in size and called a Contract Bonus Sheet. A separate sheet is used for each contract.

Postings to the Bonus Sheets are made directly from Contract Time Cards, Form 4, which are filled out and turned in to the accounting office at the end of every shift, by each shift boss. To facilitate sorting and posting, these cards have a distinctive color and are designed so that they can be carried in a coat pocket and filled out at the working place. On reaching the accounting office the contract time cards which are easily separated from the company time cards because of their distinctive coloring, are arranged in numerical order of contracts, so that the information can be speedily posted to the bonus sheets. Subsequently these cards are turned over to the payroll department where the time is posted to the payroll. Thus they serve two purposes. This is a daily routine and at the end of the month the bonus sheets need only to be totalled for hours of labor and sticks of powder, to permit calculations to begin.

(Form 4)

DEVELOPMENT AD. 3

Date: Jan. 2, 1941 Shift: 7-3 Foreman: Stuart

Working Place	Contract No.	Miner (1)	Helper (1)	Mucker (3)	Timber (6)	Drill No.	Holes Drilled	Feet Drilled	Powder 40%	Powder 55%
22-00 Drift	1	977	657			19			25	....
		747	843			44			25	....

Form 3, not illustrated, shows the bonus sheet as it appears after all postings and calculations have been completed and to assist the reader, the individual steps have been tabulated and are explained below.

(a) Powder:

Dynamite, fuse and blasting caps are popularly called powder. The cost of a case of powder is therefore the cost of a case of dynamite plus an additional charge to cover the quantity of fuse and caps which will be needed to explode the dynamite. The number of sticks of powder used from day to day is obtained from the contract time cards and is posted to the proper column on the bonus sheet. The total sticks of powder used during the month, 4370, is divided by the average number of sticks per case, 106.5, to obtain the cases used during the period. The price per case times the number of cases gives the cost of powder chargeable to the contract.

(b) Labor

The hours of labor charged daily to each contract, again, are taken from the contract time cards. Absolute accuracy on the part of the shift bosses is essential, in reporting this item, to prevent errors. Care must also be taken in posting to make sure that the right contract is charged and that the employment numbers do not become switched. It is an inviolable rule that the time of every man working on a contract must be charged to that contract. Cancellation may result if it is found that someone is giving assistance without any charge being made for the labor.

Since miners, helpers and muckers all have standard rates of pay it is only necessary to know a man's occupation in order to know his rate. The total hours of each occupation multiplied by their respective rates per hour give the total labor cost of the contract.

(c) The total cost of the contract is the cost of powder added to the total labor cost.

(d) The measured footage and the given rate, of each contract, are transferred to the bonus sheet when the contracts working sheet is brought to the general office. Multiplied together these two items give the value of the contract.

(e) The balance which remains when the total cost has been subtracted from the value is the amount of bonus which the contract has earned.

(f) The total bonus is now divided by the total hours of labor to obtain the average bonus per hour. This figure is calculated to the nearest half-cent.

(g) The total hours which each individual worked on the contract are multiplied by the average bonus per hour, the result being the amount of bonus payable to each man.

It will be seen from the Bonus Sheet that the total bonus payable is slightly larger than the bonus earned. This is because the average bonus per hour calculation is carried to just one decimal place. In other contracts, the bonus payable will be a little less than the bonus earned, and taking all the contracts into consideration, the difference between the two will be small. For practical purposes this slight difference is ignored; the total bonus payable is the amount which is journalized to the payroll.

The figures in the lower left hand corner of the bonus sheet, showing an average advance of 2.47 feet per shift and an average of 34 sticks of powder used per foot of advance, are for technical purposes and indicate the rock to be unusually hard.

Payroll Procedure.

When completed, the individual bonus sheets are signed by the mine superintendent and the chief engineer which authorizes payment of the bonus amount shown on each sheet. The sheets are then summarized to show, in numerical order:

1. The contract number, working place, footage, rate, value of contract, cost of contract, bonus or deficit, account to be charged.
2. The employment number of each man and the amount of bonus payable to him.

Summary No. 1 is used by the operating executives for comparing and establishing rates. It is also used as the basis for preparing a supplementary payroll voucher which distributes the bonus to the proper operating accounts.

Dr.	Mining	.....	
	Drifting	.....	
	Raising	.....	
	Slashing	.....	
	Etc.		
Cr.	Accrued Wages Payable		.....

(to take up bonus payable for January 1942)

Summary No. 2 is made out in duplicate and handed to the chief accountant who initials one copy and attaches it to the voucher, the other copy being retained for reference purposes. Individual bonuses are posted from the voucher to the payroll which has a column titled "contract bonus." The daily earnings plus the bonus make up the gross earnings of the individual for the period.

By this method, the bonus is incorporated into the regular payroll for the last two weeks of each month and the necessity for making out separate bonus cheques is avoided. Since it is common practice in the mining industry to pay on the 10th and 25th of the month, the ten day interval affords time to make all the required calculations and postings and to pay the bonus on the first payday of each month.

Conclusion.

The method of handling the contract bonus system will vary at different mines. Large mines will, as a general rule, assign one or more of their engineering staff to the job of supervising these contracts, to make sure that the work is being done according to plan and to investigate complaints or unusual conditions and record data which might be helpful in setting rates. Other mines may find difficulty in establishing rates and will arrange for the payment of bonuses on a sliding scale, based on the footage advance per machine shift. For example:

0 to 3 lineal feet	break even
3 to 4 " "	small bonus
4 to 5 " "	bonus increases as footage
5 to 6 " "	increases

Some mines set a limit on the bonus which they will pay, while others will pay whatever is earned, regardless of the amount. The practice varies according to the past experience of the individual operator and with local conditions, but regardless of these variations, which are attempts to fit the incentive to particular requirements, the same underlying principle can be observed wherever the system is employed.

GLOSSARY OF MINING TERMS

Drift—A horizontal tunnel.

Raise—A tunnel running at an upward angle.

Slash—The enlargement of an opening previously made.

Shaft—An opening driven at a vertical angle into the rock and to provide access into and out of the mine for men, supplies and ore.

Station—A small room cut into the rock. It is generally used as a siding or for the storage of supplies.

Heading—A wall or "face" of rock which is to be blasted away.

Stope—An underground chamber or cavity which is caused by the removal of a block of ore having definite limits, from an ore body.

Mine Dry—A large building containing shower rooms and lockers, where those who work underground change their clothes. Generally this building also contains an office for the mine snperintendent, a first aid room, a lamp room, and a room where miners receive their instructions from the shift bosses and captains.

The Credit Man and Management

An address before Montreal Chapter, January 30th, 1942

By CHAS. P. DUMAS, L.C.M.I.

Mr. President, Fellow Members, Gentlemen:

The subject of credit is a vast one and requires a close study of the fundamentals of business as a whole and of the principles of management if a fair understanding of that subject is desired. All of you are conversant with these fundamentals in relation to industrial management and a good number of you gentlemen not only possess a knowledge of credit and of commercial credit problems, but also have years of experience in credit management. To the former, I would say that they are asked to bear with me in the discussion of a subject which, in spite of its importance, may sound a little abstract and dry. As regards those for whom credit has been the object of long studies and still is within their sphere of activities, I will ask for their indulgence.

It was with a great deal of pleasure that I accepted the invitation of our President to address you to-night on the subject of "The Credit Man and Management." In spite of that pleasure and honor, I realize my inability to do complete justice to the title of my talk in the short time at my disposal and I more or less feel like the parson, who on a bright Sunday morning, got into the pulpit and just before starting his sermon realized that he had left his notes in his study. He therefore started his remarks as follows: "Brethren, having forgotten my notes, I shall rely on God's help, but I hope that at the evening service, I shall come better prepared."

The field of Credit is divided into several categories, amongst which we find: Govrnment Credit, Corporation Credit, Bank Credit, Manufacturers' and Wholesalers' Credit and Consumers' Credit. There is also "Social Credit", but we shall stick to business. . . .

The fundamentals of Credit are the same in every category, but the problems and the machinery are different. What you and I will consider to-night is Manufacturers' or Commercial Credit, in relation to Management.

If you consider that almost all business transactions or wholesalers and retailers are done on credit, you will realize the importance of the part played by the Credit Department in the financial set-up of modern business. So as to help you visualize the role of the Credit Department in relation to other departments of a business enterprise, I have drawn a chart wrich shows the Circulation of Capital as follows:

Capital is to business what blood is to the human body. It circulates up and down giving life to what would be but a heap of bones otherwise. Like blood, capital flows away from its source and flows back again. If you will look at the Chart, you will note the various stages of the circulation of Capital: first of all — the top part of the Chart represents the accumulation of capital and/or surplus and we may call this, the Reservoir. On the right hand side, you see how Capital is expended into plant, materials or the purchase of stock. Then comes the manufacturing or processing of raw material into the finished product. When the finished product is ready for

distribution, the Sales Department steps into the picture and takes over. But you will not that in all these states, Capital is flowing away from the Reservoir until it reaches the Sales Department which now makes it ready for the return trip.

If you will kindly look at the Chart again, you will find that the space on the left hand side is marked with the words "Credits and Collections." Why is that? you will ask. Because the Credit Department is the Vein, the Channel through which Capital plus Profit, flows back to the Reservoir. Until then, Capital has been going out and it is the primary function of the Credit Department to act as the pumping station not only for the Principal but also for the Profit which has been added in the course of its passage through the other Departments. In fact, the Credit Department is the only vehicle at the disposal of Capital for its return trip, since nearly all business dealings between wholesalers, manufacturers and retailers are done on credit or terms. In other words, almost every dollar of Capital, plus whatever profit has been earned by the manufacturing and sales departments, has to go through that Department. It is an indispensable organ of the business body which, if strong and normal, will add to the good health of the enterprise; and if weak and lax, will be the cause of very serious ailments and in extreme cases, death of the enterprise.

Credit Men of to-day are conscious of their responsibility to Management and realize that like purchasing, manufacturing and sales, their department plays a major part in the circulation of Capital and in the accumulation of wealth. So much so, that the Credit Men of this country along with those of the United States have adopted the following as one of their slogans: "Guarding the Nation's Profits."

The Credit Department is vitally important in modern business organization and the Credit Man is a key Executive, who generally works under the Secretary or the Treasurer and in some cases the Secretary or the Treasurer himself is the Credit Manager. In large commercial houses, the Credit Manager is a highly paid Executive, whose time is devoted to Credit and its problems with a staff of experienced employees to relieve him of some of the minor responsibilities.

The Credit Department has two major functions: First to grant or authorize Credit; Second, to collect accounts.

The granting of credit is a complicated problem which requires a great deal of psychology and experience. The problems are many and they are well illustrated in the following, undoubtedly written by a cynical Credit Man:

"Pity the Credit man, because

If he refuses an account, he's crazy; if he accepts it, he's easy:

If he asks questions, he's suspicious; if he doesn't, he's a trusting soul.

If he makes you pay, he's unfeeling; if he lets it run, he's careless.

If his percentage of loss is high, he's no good; if it's low, he won't take a chance.

If he kicks, he's a crab; if he stays in a rut, some young hot air artist gets his job.

There are born salesmen and born buyers, but who in Kingdom come, ever heard of a born Credit Man?"

THE CREDIT MAN AND MANAGEMENT

Much has been said regarding the position of the Credit Manager in his company. It has been pointed out that in many cases he is little more than an office clerk or bookkeeper. There is some evidence that many credit men feel they do not command the proper remuneration as compared to other department heads. Others complain that they are allowed only a certain amount of responsibility and that if they dare step beyond those bounds, they are taken to task for being too presumptuous. Any or all of these charges may have been true in the past, but the future will present an opportunity that will not be repeated for a long while.

Just as there is a crying need for skilled workers in the factory, so is there just as great a demand for trained people in the office. Concerns are seeking men with financial experience to take increasingly important positions of responsibility. Let us assume that the Credit Man has done his work well in the past: let us assume that he has proven his ability to think clearly and intelligently; finally, let us assume that he has been and is willing to go out of his way to find new work to do and added responsibilities to shoulder. If these assumptions are correct, then the question of salary, position and full recognition of the credit man's worth will automatically take care of itself. By this, I do not mean to say that he will be made President of his company overnight. It is extremely likely, though, that he can rather quickly improve his present position if he will show management that he can adequately handle certain responsibilities that have never previously been passed along to him.

In smaller firms yet, the responsibility for the Accounting Department rests upon the shoulders of the Credit Man. Sometimes, the Credit Man acts as Office Manager and if a new blank or special form is needed, the task of drawing it up usually falls to the man at the credit desk. Also, the problems of house finance are generally submitted to him and quite frequently the Credit Man is the actual financial head of the firm. Yet the Credit Man needs more perhaps than any other official to be free from the slavery of petty details inherent to modern business. The Credit Man is the type of official who needs to think and think clearly, particularly when business is rushing. It is not wise to so crowd the man at the credit desk that he has to work his pencil more than his brains.

It is an old cry that management has not given the credit manager proper recognition and the place in the sun that he thinks he deserves. To a certain degree that can be attributed to poor salesmanship but to a much greater extent, this situation arises from the emphasis that sales play in the everyday thinking of company executives. Generally speaking, executives recognize the soundness of the Credit Man's views and appreciate the wisdom of his ideas on credit matters. In borderline cases, they may not adopt his suggestions because of a possible reaction on sales.

This is perfectly natural, since many executives come up through the ranks with training in sales rather than the financial departments. Even where such is not the case, we must always remember that in the last analysis sales are the life-blood of any business. For these two reasons, sales departments over a period of years have had more influence than the credit department. Thus, it results that during normal periods the credit manager

will usually come out second-best on his recommendation if there is any possibility of customer reaction that might be reflected in the sales curve.

Under ordinary conditions, management is primarily interested in sales, for sales make possible the volume production that results in profits. To-day, capacity operations are assured. Now, management's emphasis is to protect profits that have been earned and to safeguard the potential profit in its backlog of unfilled orders. Management is carefully selecting, from the new business that is offered, the type of orders that best fit into present production schedules. For example, some manufacturers are now refusing orders involving special work; some are now producing only part of their regular line of products and are concentrating on these few items; some have eliminated certain lines that ordinarily are not profitable, or the situation has been adjusted by corrective price increases. Such changes in policy are all closely tied in with sales. Fear of possible customer reaction has delayed these adjustments for a long while, but management is now willing to go ahead, because it can safely do so under present conditions. If financial and sales executives are now willing to revise sales policies, it is also the time for the Credit Manager to do the same thing on credit policies.

Credit spells with a capital "C" and in turn is based on these "C's", namely: CHARACTER, CAPACITY and CAPITAL. **Capital** represents the amount invested in business or accumulated from profits. Lack of Capital is a common fault of retailers and in fact of every class of business and accounts for the largest number of business failures. **Capacity** is represented by the ability of the debtor to meet his obligations as they become due. This may be determined by the fact that there is, or is not, sufficient capital invested in the business, by the ability of management to show a profit or a loss or by the rigid application of a definite credit policy. **Character** is highly intangible and reflects the personality of the debtor.. It is most important of all those "C's" and ranks ahead of Capacity and Capital. Each one of the three "C's" is just as important as the other two are and should any of the three be absent, credit is no longer credit but becomes a gamble. True enough, there always is a certain amount of risk attached to the granting of credit even if the three "C's" are present, and although that element of risk is always present, it can be controlled or minimized to such an extent that losses will only represent a fractional percentage of total credit turnover.

The Credit Man has to be wide awake at all times and has to obtain all the information he can possibly get as to the capital, capacity and the character of his customers. He is interested in finding out how his client or prospective client meets his obligations elsewhere. This information cannot be obtained from the customer himself, and if it is, same often is misleading. The information obtained direct from other suppliers is so much more accurate and that is why the Credit Men of this country now co-operate among themselves and exchange their ledger experience through their own co-operative Association.

Other sources of information are also available to the Credit Man. The Mercantile Agency plays an important part in that field. There are several Mercantile agencies operating in Canada and in the United States and the best known of them is a merger of two agencies which had been competitors

for years. The principal function of the Mercantile Agency is to compile information on the antecedents of a business, obtain a financial statement of its affairs and rate firms and individuals according to their worth. Mercantile Agencies render valuable services to business and complete the information supplied through Credit Associations.

Another source of information, which I should have mentioned in the first place, is the salesman. He generally is the first medium through which the Credit Man can learn anything about his customer and should be the most accurate one of all. In some cases, however, the salesman may be biased and his partiality is reflected in the information passed on to the Credit Department. Other sources of information include Banks, Court House records, Bankruptcy reports, Lacombe Law lists, Real Estate transfers, Registrations or Dissolutions of partnerships, the Quebec Official Gazette and the Canada Gazette, etc.

Good management, successful management, methods have distinguishing marks. They are not imponderable and entirely abstract qualities. "Good management" works very uniformly with certain tools while "Bad management" works very uniformly without these tools or else with them badly dulled.

Primarily concerned with failure, the Credit Executive should be able to go into a business and break it down, if the occasion warrants, find out why it doesn't make money, and then be able to prescribe remedies. The inability of a lot of men in top management positions to identify the why, how much and where of profit or loss is responsible for a great number of business failures. After all, the ultimate test of credit quality is whether the management of a debtor company is capable of making money under normal conditions.

Once the Credit Man has all the information he can possibly obtain, he will grant his customer a margin of credit based among other things on his appreciation of the customer's capital, capacity and character, such margin to be increased or reduced according to circumstances. If the account is not paid in accordance with the arrangement or at normal terms, the chances are that the margin of credit will be revised if not reduced. After reasonable time and contacts with the customer, it may happen that payment of the account is not made, in which event the account will be handed over to the Collection Department. I will not go into the details of collecting delinquent accounts and will spare you the enumeration of the worries and tribulations of that important adjunct to every Credit Department, but let me say here that efficiency in the Collection Department is just as important as efficiency of the Credit Department. It requires a great deal of patience, ingenuity and tact to handle delinquent customers, if goodwill is to be retained at the same time that slow and doubtful accounts are being collected.

Too many times credit executives look upon credit management as a science and completely or partially forget the fact that while credit management is a science, it also, at the same time, is a highly developed art. Science is any orderly compilation of facts from which general principles may be deduced. Certainly, Credit Managers must compile careful and accurate facts and just determine from these facts their credit policies. On the other hand, that is not enough. The art of any operation is the use of a

special skill and a special technique in the performance of the credit function. It is in the execution of credit management, as an art, that the Credit Man becomes extremely useful and an asset to the sales department of his business.

The relationship between the credit department and the customer should be comparable to that of a good shoe. It is a matter of close contact, and at the same time, continuing its relationship primarily as the basis of comfort and good service. A customer wants to feel comfortable about his account with his supply house. If he does not feel comfortable about it, only a short time passes before he will sever his relationship with that house irrespective of how well the salesman may attempt to hold onto that account.

Many merchants overlook the fact that in times of advancing markets, their financial condition can become as dangerous and often as disastrous as is the case of declining markets. Advancing markets automatically require more stock investment. This lack of proper planning for this extra capital will quickly hamper selling when it means the most to both parties. It is at once obvious that this is the problem for the sales and the credit department working in close conjunction with a view to encouraging the customer in the proper financing of his business so that he may take advantages of market advances in his business without letting him be destroyed by it.

Credit Men must never forget that their success runs concurrently with the success of the sales department, and that they cannot begin to function until the sales department has produced business on which they may begin their operations. They must be, in fact, Executives in their thoughts as well as in their acts if they want the general management of the firm to recognize in them the right of equal consideration in the general management of the business. Generally speaking, the credit department is generally treated by the management and by the sales department in about the same way as its members may look upon themselves.

The Credit Man must, at all times, remember that the customer is the one who speaks the last word in the success of his business. He may talk little about his attitude toward the credit department; he never buys, however, without consideration of the future relations of the credit department of the firm with whom he deals. Whether we like it or not, we cannot approach the question of general business with hope of success unless we think in terms of the overall needs of the customer. Every sale must be the foundation of another sale.

We have gone very briefly indeed over the field of credit in relation to Management and over the problems of the Credit Man, but my time is up and I must conclude my remarks. Personally, I do not believe in long addresses and in this regard, I share the feelings of the Deacon who opened his sermon by saying: "Although there is no rule against long sermons in this church, I do not feel that any soul is saved after the first 20 minutes." I have not saved any soul here to-night, and the least I can do is not to lose any by being too long-winded.

You appreciate the part played by the Credit Department in the financial organization of modern business. A swift glance at my Chart will tell you that is the carrier of capital in its circulation through the veins of Business. Other departments such as Purchasing, Manufacturing and Sales, are the arteries which take capital away from its source, while the Credit Department

is the vein which takes it along with profit, back to the Reservoir. The Credit man is an important Executive in business and should be regarded as such.

As you can see, my whole thought is an emphasis upon the credit manager's function as the watch dog of profits. This means that he must be the very one to say "no" and probably say it often. At the moment additional volume is not required. What is all important is that when the credit collapse comes, you, as credit manager, will stand out in the eyes of management as the person that has protected the profits earned during this active period. You will be the one that must quickly accomplish this orderly liquidation in order to provide the necessary funds that will be urgently needed at that time. To the degree that you are successful in this program, so will you be recognized as truly a credit executive, one who is ready and able to assume a more active part in the executive management of your company. I am confident that this can be done if we will but do it.

The field of credit is wide open to young men anxious to succeed in business. A recent survey conducted by a well-known American business magazine reveals that next to Sales, the Department which holds the best chance of advancement is the Credit Department while Sales Promotion, Production, Plant, Advertising, etc., come after. Those of you who may have to make a choice, should not hesitate to enter the Credit field. If you ever become a Credit Man, you will become an indispensable man in organized business; as such you will be called upon to guard the nation's profits.

Credit is a symbol of civilization. If we read history, we note that as soon as the human race started coming out of the Dark Ages and began to exchange commodities, credit came into existence. The mediums of exchange were rather cumbersome at first. Commodities such as sheep, cattle, horses, and even wives were used at different stages of human progress until currency was developed by the Phoenicians and the Babylonians. Credit is the expression of the trust one man places in another man and which is non-existent amongst uncivilized people. Credit is a prerogative of democracy and may be classed as one of the liberties for which we are now fighting.

Thank you.

McMaster University Annual Examinations

1942

Arts — Cost Accounting

First Paper — Monday, January 12th, 7.30-9.30 p.m.

Grading Points

First Section: COST ACCOUNTING THEORY

Problem 1.

30 The following are common and standard terms used in Cost Accounting statements: Prime Cost; Direct Cost: Indirect Cost; Manufacturing Expense; Selling Expense; Administrative Expense; Cost of Goods Sold; Gross Profit on Sales; Net Profit on Sales.

The trial balance as at December 31st, 1941, contains the following accounts:

Telephone and Telegraph	$ 500.00
Insurance and Taxes	1,000.00
Travelling Expense	2,000.00
Factory Supplies	2,300.00
Other office Expense	2,500.00
Office Salaries	5,000.00
Rent of Factory	5,000.00
Light and Power	6,500.00
Advertising	7,000.00
Indirect Labor	7,000.00
Depreciation	8,000.00
Sales Salaries	8,500.00
Officer Salaries	12,000.00
Direct Materials	36,000.00
Direct Labor	50,000.00
Sales	166,900.00

Arrange these accounts under their respective classifications of the headings in the first paragraph. Show the total amount under each class.

Second Section: COST ACCOUNTING PRACTICE

Problelm 2.

There were four manufacturing departments. If they bear the 10 Manufacturing Expense equally, what amount would be charged to each Department? (This refers to the trial balance above).

Problem 3.

One Manufacturing Department produced 3,725 items during the 10 period. What amount in the unit cost of the Department would be Manufacturing Expense? (This refers to the trial balance above).

Problem 4.

Providing there are no other account changes, show the new 10 totals in the account groups affected by a 10% increase of all labor for the period. (This refers to the trial balance above).

Problem 5.

The McMaster Company has proceeded with the closing of the 30 books to a point where all expenses, totalling $9,900, have been charged into Work in Process. The record of production shows 5,000 articles finished and 2,000 articles unfinished, the latter estimated to be one-fourth completed. The estimated cost of a finished article is $2.00.

(a) Write the journal entries to record in the general books, the value of the inventories at estimated costs, and the apportionment of the adjustment account between Work in Process and Finished Goods.

(b) Write the journal entry to record the Cost of Goods Sold, assuming that four fifths of the finished goods were sold.

(c) Correct the estimated cost per article to agree with the actual cost.

10 Points will be allotted for neatness and form of presentation. Total — 100 Points. Gradings will be announced as:

80 points or better — "A"
60 to 80 points — "B"
40 to 60 points — "C"
under 40 points — "D"

McMASTER UNIVERSITY ANNUAL EXAMINATIONS, 1942

Arts — Cost Accounting

Fall Sessional Examinations, 1941-1942

SOLUTIONS

Problem 1.

Prime Cost:		
Direct Materials	$ 36,000.00	
Direct Labor	50,000.00	
		$ 86,000.00
Direct Cost:		
Direct Materials	$ 36,000.00	
Direct Labor	50,000.00	
		$ 86,000.00
Indirect Cost:		
Indirect Labor	$ 7,000.00	
Light and Power	6,500.00	
Factory Supplies	2,300.00	
Insurance and Taxes	1,000.00	
Rent of Factory	5,000.00	
Depreciation	8,000.00	
		$ 29,800.00
Manufacturing Expense:		
Indirect Labor	7,000.00	
Light and Power	6,500.00	
Factory Supplies	2,300.00	
Insurance and Taxes	1,000.00	
Rent of Factory	5,000.00	
Depreciation	8,000.00	
		$ 29,800.00
Selling Expense:		
Sales Salaries	$ 8,500.00	
Travelling Expense	2,000.00	
Advertising	7,000.00	
		$ 17,500.00
Administrative Expense:		
Officers' Salaries	$ 12,000.00	
Office Salaries	5,000.00	
Telephone and Telegraph	500.00	
Other Office Expense	2,500.00	
		$ 20,000.00

Cost of Goods Sold:		
Prime Cost	$ 86,000.00	
Manufacturing Expense	29,800.00	
		$115,800.00
Gross Profit on Sales:		
Sales	$166,900.00	
Cost of Goods Sold	115,800.00	
		$ 51,100.00
Net Profit on Sales:		
Gross Profit on Sales	$ 51,100.00	
Less:		
Selling Expense	17,500.00	
	33,600.00	
Less:		
Administrative Expense	20,000.00	
		$ 13,600.00

Problem 2.

Manufacturing Expense:		
Indirect Labor	$ 7,000.00	
Light and Power	6,500.00	
Factory Supplies	2,300.00	
Insurance and Taxes	1,000.00	
Rent of Factory	5,000.00	
Depreciation	8,000.00	
Total	$ 29,800.00	
Four Departments bear		$ 29,800.00
One Department bears: one-fourth		$ 7,450.00

Problem 3.

Manufacturing Expense for one Dept. computed as above	$ 7,450.00
3,725 items bear $7,450.00; one bears $7,450.00 ÷ 3,725	$ 2.00

Problem 4.

Prime Cost	$ 86,000.00	
Add 10% of Labor of $50,000.00	5,000.00	
		$ 91,000.00
Direct Cost	$ 86,000.00	
Add 10% of Labor of $50,000.00	5,000.00	
		$ 91,000.00
Indirect Cost	$ 29,800.00	
Add 10% of Indirect Labor of $7,000.00	700.00	
		$ 30,500.00
Manufacturing Expense	$ 29,800.00	
Add 10% of Indirect Labor of $7,000.00	700.00	
		$ 30,500.00
Cost of Goods Sold	$115,800.00	
Add 10% Labor	$ 5,000.00	
10% Indirect Labor	700.00	
	5,700.00	
		$121,500.00

Gross Profit on Sales		$ 51,100.00	
Less 10% Labor	$ 5,000.00		
10% Indirect Labor	700.00		
		5,700.00	
			$ 45,400.00
Net Profit on Sales		$ 13,600.00	
Less 10% Labor	$ 5,000.00		
10% Indirect Labor	700.00		
		5,700.00	
			$ 7,900.00

Problem 5.

Inventories at estimated cost:

Work in Process: 2,000 articles one-fourth finished; equals 500 finished.

Finished goods:	5,000 at $2.00	$ 10,000.00	10/11
Work in process as above:	500 at $2.00	1,000.00	1/11
Total		$ 11,000.00	11/11

Journal Entries

Debit: Finished Goods	$ 10,000.00	
Credit: Work in Process		$ 8,900.00
Adjustment		1,100.00

To record the estimated cost of finished goods, carry the over estimate of costs to the Adjustment account, and leave the balance of the Work in Process account to show the estimated cost of the unfinished work.

Dr. Adjustment	$ 1,100.00	
Cr. Work in Process		$ 100.00
Cr. Finished Goods		1,100.00

To transfer the balance of the Adjustment account to Work in Process and Finished Goods and record the actual cost of each.

(b) Section

Dr. Cost of Goods Sold	$ 7,200.00	
Cr. Finished Goods		$ 7,200.00

To record the cost of four-fifths of the Finished Goods that have been sold, in the cost of Goods Sold Account.

(c) Section

Correction of estimated cost per article to actual cost:

Estimated cost per article	$ 2.00
Less: Overstatement in the estimate of $1,100.00 ÷ 5,500 finished articles	.20
Estimated cost corrected to	$ 1.80

Prepared by H. Bricker, C.G.A., R.I.A.

MEMBERSHIP FEES

MEMBERS WHOSE MEMBERSHIP FEES FOR THE CURRENT YEAR ARE NOW DUE, OR OVERDUE, ARE ASKED TO KINDLY REMIT AS SOON AS POSSIBLE AND THUS SAVE THE SOCIETY TIME AND TROUBLE IN THIS CONNECTION.

Cost Standards

Analysis of Overhead Variations

By H. B. WILLIAMSON, A.I.C.A.

By Kind Permission of The Australian Accountant

The fact that, fundamentally, the most exact measures of efficiency are time, not value, needs little explanation; it is an obvious truth, so obvious that it is rather astounding that any other method of oncost allocation was ever seriously considered.

All Indirect Expense is incurred, whatever the production, only because of effluxion of time, and, as time is also responsible for output, it is logically the only scientific basis for oncost absorption.

Without the value of this element being recognized in setting up Cost Standards, very little real analysis is possible, the main reason for variations, Productive Hours, being non-existent; where, however, there is a system of Budgetary Control in which an hourly rate has been predetermined, comparison between Actual and Standard times and Expenditure is possible.

These comparisons may, or may not, result in alterations of Standard rates per hour, but a clearer and closer analysis of reasons for variation from Standard is possible.

The first requirement for all analysis is the ascertainment of a Standard rate by which variations may be measured, and it is the basis of this Standard which has to be determined.

The essentials are Normal Production and Normal Burden.

Normal Burden rate has been variously described as rate appertaining to:

(1) Average Production over a period of years.
(2) Practical Capacity of Plant.
(3) Capacity to make and sell.

(1) Average Production is an unsound basis upon which to distribute all burden; it means an inequitable distribution of Fixed Expense.

On the other hand, where the exigencies of the business concerned require a Standard Rate and comparison from period to period, they would utilize this method for arriving at the desired Rate.

(2) Practical Capacity is generally considered to be in the vicinity of 85% of Theoretical Capacity; this latter is the theoretical output of the plant working over a given period under perfect conditions, no allowance being made for breakdown, repairs, absence of workmen, idleness, etc. The allowance of 15% is made to cover all such contingencies, and reveals a figure which is, in effect, "Actual Capacity to Produce." It could be also termed "Normal" in contrast with Average Capacity.

When Burden is budgeted on this basis, Fixed Expense will be adequately dealt with, but, as Actual Capacity may not be Actual Productive Hours for the particular period concerned, alteration in rate may be necessary to cope with Variable Expenses.

In saying it may be necessary, there always has to be considered the probability that it may be better, taking into consideration the particular

business for which Standards are being prepared, to allow all rates to remain unchanged from year to year for comparative purposes. This can be understood where production volume is constant, as, where rates are changed to absorb all expense, probable reasons for variation are submerged in applied oncost, the result creating, possibly, an unwarranted sense of false security.

(3) Capacity to make and sell comes somewhat under the same category as Practical Capacity, and the two may be synonymous, all depending upon current demand.

Where the main requirement of the firm is periodical absorption of all Overhead, this method of arriving at the rate would meet the case, but here again Fixed Expense requires a different treatment.

Bearing in mind that most works are laid out for a specific purpose, definite productive volume, and that Fixed Expense is incurred in the setting-up and maintenance of the Plant, to continue, though that Plant shut down, it is obvious that, however Variable Expense may be disposed of, Practical Capacity is the only sane method for its absorption.

A combination of Practical Capacity and either Average, or Capacity to Make and Sell is the solution; and from such, a Flexible Budget may be compiled.

The Outline would be somewhat as follows:

Practical Capacity	10,000	£725	Fixed
Average Capacity	8,000	£1000	Variable

True analysis is carried out in four phases, and the following figures will illustrate the method.

Standard Normal Hours Fixed	1,000	Standard Normal Expense Fixed	£125
" " " Variable	800	" " " Variable	£200
Actual Hours	832	Actual Expense	£416
Standard Hours for Actual Production	800	Standard Expense for Actual Production	£300

(4) Price Variance.

The phases to be considered are:

(1) Idle Capacity.

(2) Standard Variance.

(3) Efficiency Variance.

(1) Idle Capacity consists wholly of Fixed Expense.

This could be called Passive Expense, that is, expense that will continue though the plant close down, incurred irrespective of production.

On the other hand, Variable Expense may be termed Active; it consists of charges for which Active Production is directly responsible, and, being of this nature, must be disposed of over output, no part of it included as Idle Capacity.

As there are 168 hours of Idle Time, and Fixed Expense rate is 2/6 per hour, Idle Capacity is £21.

(2) Variance from Standard being the difference between Actual and Standard hours at Standard rate, will be £12.

(3) Utilized Capacity is Actual Expense less Idle Capacity, in this instance £395.

As Standard Expense is £300, total Variance is £95.

Efficiency Variance is computed by calculating the Efficiency Ratio; it will be the percentage that Actual are to Standard Hours, i.e., 104%.

Dividing Actual Expense by this figure gives £400, representative of overhead had full efficiency obtained. The difference is Efficiency Variance, £16.

(4) Included in the £400 thus ascertained is Idle Capacity £21, which must be deducted before arriving at Price Variance.

The net amount of £379, less Standard Expense for Actual Production gives Price Variance £79.

The following is a typical Manufacturing Expenses Account, Costs:

Manufacturing Expenses

To Actual Expense	£416	0	0	By Work in Process	£312	0	0
" Variance from Standard	12	0	0	" Idle Capacity	21	0	0
				" Efficiency Variance	16	0	0
				" Price Variance	79	0	0
	£428	0	0		£428	0	0

Situations Wanted

Experienced Cost Man, over military age, with experience also in purchasing and Office Management, desires change. Experienced in the installation of systems and can take full charge. Apply Box 72, Cost and Management.

Thoroughly experienced Textile Cost and General Accountant, at present engaged, desires change where services will be of more value in the war effort than at present. Now in full charge of offices and with many years of experience in this field. Not subject to military service but at least six weeks before available. Apply Box 73, "Cost and Management."

Young married man with several years experience in Textile Costs, Time Study and Personnel Management desires position in Ontario. At present engaged but not on war work. Apply Box 75, "Cost and Management."

Young married man with good background in Accounting and at present studying Cost Accounting, desires position with sound firm, preferably in the Hamilton district. Will accept moderate salary to commence if prospects are good. Apply Box 71, "Cost and Management."

Personal Notes

Congratulations to W. L. "Wilf" McMahon, popular immediate past chairman of the Hamilton Chapter. It's a boy, and Wilf is strutting around as though he were of some importance.

Jack Thompson, student member of the Kitchener Chapter, is now a proud member of the Royal Canadian Air Force, and several other members are due to follow him in the near future.

Norman Hagen, also of the Kitchener Chapter, has joined the Royal Canadian Navy.

Nolen Hembruff, a student member of the Toronto Chapter is also a member of the Royal Canadian Navy.

COST STUDIES PUBLISHED BY THE SOCIETY

(Copies available at 50 cents each).

Administration and Selling Costs, Distribution of. A. E. Keen ..... Apr., 1929
Aircraft Costing, Problems of ..... Dec., 1940
Automobile Assembly Costs and the Financing of Sales. A. C. McAlpine ..... Sept., 1932
Aviation Costs. J. Hunter ..... Apr., 1929
Aviation in Canada—History and Development of ..... Feb., 1942
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Billing and Controlling Accounts at Montreal L., H. & P. D. D. McInnes..... Dec., 1931
Bonus Methods. P. E. Dufresne ..... May, 1933
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Budgetary Control ..... July, 1934
Budgetary Controls That Control ..... Apr., 1940
Business, Control of, Through Budget. H. C. Perry ..... Sept., 1938
Business Organization. William Snaith ..... July, 1937
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Cost Accounting in Aircraft Industry ..... Dec., 1940
Cost Data, Value of, to Management. G. R. M. Dingle ..... Dec., 1938
Cost Data, Preparation of. H. M. Loree ..... Nov., 1938
Cost Information—Presentation of to Foremen. E. M. Detwiler ..... Dec., 1937
Costing—Marginal and Conventional ..... Jan., 1941
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Control of Labour and Material in Process. W. M. Lane ..... Sept., 1930
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Cost Finding, Methods of. D. R. Patton, C.A. ..... Apr., 1936
Cost Studies on Proposed Change in Process. C. E. Shumaker ..... May, 1931
Cost System of The Norton Co. A. S. Merrifield ..... May, 1929
Costs and Overhead in a Department Store. A. E. Walford, C.A. ..... July, 1931
Cash and Balance Sheet Budgeting. A. G. Howey ..... Dec., 1937
Cost Accounting for Distribution and Selling ..... Jan., 1938
Cost Accounting by Machine Method. G. W. Kemp ..... Mar., 1938
Cost Accounting, Efficiency of. W. Johnston ..... Aug., 1938
Cost Problems in Relation to Power ..... Mar., 1941
Credit Executive, His Work and Philosophy. E. E. Webster ..... Mar., 1939
Daily Newspaper, Costing a ..... June-July, 1938
Department Store Management and Accounts, Some Phases of. G. F. Klein.... Sept., 1930
Depreciation on the Basis of Business Volume, Fixing. B. W. Lang ..... Feb., 1935
Depreciation – A Practical Time Saving Plan of Accounting for Fixed Assets and.. Dec., 1941
Differential or Marginal Costs ..... April, 1939
Distribution, Cost of. G. H. Armstrong ..... Dec., 1934
Differential or Marginal Costs. R. G. H. Smails ..... Apr., 1939
Economics of Cost Accounting. E. D. McCallum ..... May, 1930
Electrical Power Cost, Control of. H. R. Hatcher ..... Jan., 1933
Electrical Power Costs. A. N. Sainte Marie ..... Feb., 1933
Exchange Fluctuations in Relation to Accounting. A. E. Cutforth, F.C.A. ..... Sept., 1933
Executive Training, A New Technique in. A. B. Gates ..... Aug., 1936
Executive Requires From the Cost Accountant, What the. C. D. Landell..... Nov., 1936
Excess Profits Tax Act ..... Mar., 1941
Earned Hour Wage System. J. J. McGill ..... Mar., 1938
Financial Officer—The Chief and Business Management ..... Dec., 1941
Financial Statements, Construction & Interpretation of. A. E. Nash, C.A..... Sept., 1932
Fire and Use & Occupancy Insurance. A. J. Mylrea ..... July, 1932
Fraud in Accounts—Its Prevention and Detection. H. W. Blunt, C.A. ..... Aug., 1934
Fuel for Thought. W. T. Brickenden, B.A.Sc., M.E. ..... June, 1936
Fixed Assets—Accounting For. P. W. Wright ..... Jan., 1939
Gas Company, Accounting and Costing Problems of a. E. J. Tucker ..... Sept., 1934
Chocolate and Confectionery Factory, Cost System for ..... Sept., 1940
Group Bonus System of DeForest Radio Corporation, Ltd. ..... Oct., 1930
Group Incentives. R. Presgrave ..... June, 1932
Hydro Electric Power Costs. R. A. C. Henry ..... Nov., 1937
History and Development of Accounting. S. D. Reavely ..... Feb., 1938
Indirect Labour, Control of. R. Presgrave ..... Aug., 1932
Industrial Costs—A Major Factor in ..... Feb., 1940
Industrial Engineering, Advantages of. P. E. Dufresne ..... May, 1931
Industrial Engineering and Its Relation to Standard Costs. J. E. Goudey..... July, 1931
Industrial Engineer to Accountancy Department, Relation of. F. H. Vercoe.... Apr., 1935
Industrial Relations. F. M. Morton ..... Apr., 1938
Incentive and Security, Balancing of. R. E. Flanders ..... Dec., 1938
Inventories—The Cost Approach to ..... Dec., 1941
Insurance. B. A. Dugal ..... Apr., 1933
Insurance of Employment. Sir James Woods ..... Apr., 1938
Inter-Play of Brewery Costs ..... Aug., 1939